IN THE SPECIFICATION:

Please amend the first full paragraph on Page 3, beginning on line 3 to read as follows:

In order to achieve the first object, as recited in claim 1 mentioned below, the invention provides a legged mobile robot having at least a body and a plurality of legs each connected to the body through a first joint and each having a foot connected to a distal end of the leg through a second joint, comprising: an elastic member installed at a position between the second joint and a floor contact end of the foot; and a displacement sensor installed in a space defined by a top-to-bottom height of the elastic member such that a displacement of the floor contact end of the foot relative to the second joint can be detected. Thus, since it is arranged such that an elastic member that contracts in response to a load and is installed at a position between the second joint and a floor contact end of the foot and a displacement sensor is installed in a space defined by a top-to-bottom height of the elastic member such that a displacement of the floor contact end of the foot relative to the second joint can be detected, it becomes possible to dispose the sensor including its components such as a converter or the like is made enough to be housed in the elastic member at a limited space of the foot of the legged mobile robot.

Please amend the second full paragraph on Page 3, beginning on line 18 and ending on Page 4, line 4 to read as follows:

As recited in claim 2 mentioned below, the invention is arranged such that a plurality of the elastic members having cylindrical shapes are installed at the position

between the second joint and the floor contact end of the foot, at separate locations viewed from top. Since it is arranged such that such that a plurality of the elastic members are installed at the position between the second joint and the floor contact end of the foot, at separate locations viewed from top, it becomes possible to make the sensor compact enough to be housed in the elastic member at the limited space of each foot of the legged mobile robot and to optimize elasticity of the foot. In other words, the foot of the legged mobile robot should preferably have appropriate elasticity for both of the bending (rotational) direction and up-and-down direction. However, if the elastic members are unevenly gathered about the center of the foot, for instance, the requirements contradict and it becomes difficult to satisfy both of the requirements. If the elastic members are installed at separate locations viewed from top, e.g., near the edge (periphery) of the foot, the contradicted requirements can be achieved by the above-mentioned configuration.

Please amend the first full paragraph on Page 8, beginning on line 3 to read as follows:

As recited in claim 16 mentioned below, the invention provides a legged mobile robot having at least a body and a plurality of legs each connected to the body through a first joint and each having a foot connected to a distal end of the leg through a second joint, comprising: a displacement sensor installed at a position in or adjacent to an elastic member <u>that contracts in response to a load and is</u> positioned between the second joint and the foot and producing an output indicative of a displacement of the floor contact end

of the foot relative to the second joint; and a floor reaction force calculator calculating the floor reaction forces acting on the foot based on the output of the displacement sensor. Thus, since it is arranged to install a displacement sensor producing an output indicative of a displacement of the floor contact end of the foot relative to the second joint such that a floor reaction force calculator calculates the floor reaction forces acting on the foot based on the output of the displacement sensor, it becomes possible to calculate the floor reaction force accurately, thereby enabling to control the legged mobile robot to walk more stably.